Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Original) A method for visualising a spatially resolved data set (D) using an illumination model (BM), with a datum ($D(\underset{\sim}{\alpha}, \beta, \gamma)$) of the data set (D) being associated in each case with a volume element (V) whose position is described by coordinates ($\underset{\sim}{\alpha}, \beta, \gamma$) in a measurement coordinate system (K_m), with the data ($D(\underset{\sim}{\alpha}, \beta, \gamma)$) being loaded as at least one texture ($T\underset{\sim}{\alpha}_i, T\beta_j, T\gamma_k$) into graphics hardware in order to generate a pictorial representation (5) in a projection space, characterised in that the illumination model (BM) is evaluated in the measurement coordinate system (K_M).

2. (Original) A method in accordance with claim 1, in which the data ($D(\underset{\sim}{\alpha}, \beta, \gamma)$) of the data set (D) are processed without transformation from the measurement coordinate system (K_M) into another coordinate system, in particular without transformation into a Cartesian and/or isotropic coordinate system.

3. (Currently Amended) A method in accordance with ~~any one of the preceding claims~~ claim 1, in which the measurement coordinate system (K_M) is a non-Cartesian measurement coordinate system (K_M).

4. (Currently Amended) A method in accordance with ~~any one of the preceding claims~~ claim 1, in which the measurement coordinate system (K_M) is a cylindrical system or a spherical coordinate system (K_M).

5. (Currently Amended) A method in accordance with ~~any one of the preceding claims~~ claim 1, in which linear interpolation is carried out between the data ($D(\underset{\sim}{\alpha}, \beta, \gamma)$) of the data set (D) in the measurement coordinate system (K_M).

6. (Currently Amended) A method in accordance with ~~any one of the preceding claims~~ claim 1, in which the illumination model in the data set (D) is evaluated close to a singularity.

7. (Currently Amended) A method in accordance with ~~any one of the preceding claims~~ claim 1, in which the data ($D(\alpha, \beta, \gamma)$) of the data set (D) represent a volume resolved scan of a body (G_0); and in which the pictorial representation (5) is a three-dimensional representation (5), in particular a semi-transparent representation (5), of the body (G_0).

8. (Currently Amended) A method in accordance with ~~any one of the preceding claims~~ claim 1, in which the pictorial representation (5) is generated as a stereoscopic projection.

9. (Currently Amended) A method in accordance with ~~any one of the preceding claims~~ claim 1, in which the data ($D(\alpha, \beta, \gamma)$) of the data set (D) are generated by means of an ultrasonic measuring device (1).

10. (Currently Amended) Use of a method in accordance with ~~any one of the preceding claims~~ claim 1, in particular for medical purposes, for the fast generation of three-dimensional representations (5) of a body (G_0), in particular of a human body or parts thereof, with reference to data ($D(\alpha, \beta, \gamma)$) gained by a technical measurement.